STANDARDIZED PERMIT APPLICATION

INSTRUCTIONS

WORKSHOP DRAFT: APRIL/MAY 2005

TABLE OF CONTENTS

SECTION I - FACILITY IDENTIFICATION

A. FACILITY IDENTIFICATION

List the following information about the facility:
22CCR 66270.13

1. Facility name.

2. EPA ID number.

3. Address (street, city, state, Zip code).

4. Telephone number.

Is this application for the renewal of an existing standardized permit?
YES_____ NO_____.
If yes, describe what is being proposed as changes from the existing permit with regard to the facility and/or its operations.

B. PREPARER OF STANDARDIZED PERMIT APPLICATION

Give the following information regarding the preparer(s) of the facility's Standardized Permit application:
22CCR 66270.14(b)(19)

1. Name of the firm, if applicable.

2. Name(s) and title(s) of the person(s) responsible for preparation of the operation plan.

3. Work telephone number(s) of the person(s) responsible.

4. Dated, original signature(s) of the person(s) responsible.

_____

Name Title Date

_____

Name Title Date

_____

Name Title Date

C. OWNER/OPERATOR SIGNATURES AND CERTIFICATION AND DISCLOSURE STATEMENT

1. Give original, dated signatures of the following:
22CCR 66270.10(a)&(b), 66270.11(d), 66270.14(a)

   a. Facility owner.

   b. Facility operator, including facility operator certification required under Title 22, CCR, Section 66270.11(d)

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to be the best of my knowledge and belief, true, accurate, and complete. I further certify that the property owner has been informed that a hazardous waste facility will be operated on the premises. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations".

_____

Owner Date

_____

Operator Date

2. All facilities shall complete and submit a Disclosure Statement, Form DTSC 8430. (Health and Safety Code 25112.5) except for the following, as excerpted from Senate Bill No. 27:

"Notwithstanding Section 25112.5, a disclosure statement for an application for a series C standardized permit, as specified in Section 25201.6, shall consist of documentation of any convictions, judgments, settlements, or orders resulting from an action by any local, state, or federal environmental or public health enforcement agency concerning the operation of the facility within the last three years, as documents would be available under the California Public Records Act (Chapter 3.5 (commencing with Section 6250) of Division 7 of Title 1 of the Government Code) or the Information Practices Act of 1977 (Chapter 1 (commencing with Section 1798) of Title 1.8 of Part 4 of the Civil Code), except that the owner or operator of a facility issued a series C standardized permit shall make the information specified in Section 25112.5 available to the Department upon request".

D. CONFIDENTIALITY REQUESTS AND JUSTIFICATIONS

In accordance with Section 66260.2 of Title 22, CCR, any information submitted to the Department may be claimed as confidential by the submitter. Any such claim shall be asserted at the time of submission. If no claim is made at the time of submission, the Department may make the information available to the public without further notice.

If any of the information provided in the Operation Plan can be construed to be a "trade secret" within the meaning of Section 25173, California Health and Safety Code, the trade secret item(s) must be clearly identified "Confidential: Trade Secret" in the Plan. All unmarked items will be available for public review without notice to the facility owner and/or operator. If only parts of the Plan or of a given supporting document are confidential, the following should be provided: two complete copies of the document with the confidential items marked and one copy with the confidential items deleted. For each specific trade secret item, the following questions must be answered in a written attachment to the plan: 22CCR 66270.12(a)

1. How long is the item to be considered a trade secret?

2. What measures have been employed by the company to maintain that item as a trade secret?

3. Who else has received a copy of the item and what measures were taken with respect to distribution of that copy to maintain the item as a trade secret?

4. What decision (if any) has been made by any other government agency regarding the confidentiality of the item?

5. What will be the substantial harm to the company's competitive position from disclosure of the trade secret item? Include specific information about what the harm is and why it should be considered substantial, as well as information about the relationship between disclosure and harm.

The two copies of the Plan and supporting documents submitted to DTSC, which contain a trade secret item for which the above questions have been answered will be maintained in controlled files. The copy with the trade secrets deleted will be placed in a file, which is open for public inspection.

SECTION II - FACILITY LOCATION

A. DETAILED TOPOGRAPHIC MAP

Submit a topographic map showing a distance of 2000 feet around the facility at a scale of 1 inch equal to not more than 200 feet. The map must include contours sufficient to clearly show the pattern of surface water flow in the vicinity of and from each operational unit of the facility (e.g., contours with an interval of 5 feet, if relief is greater than 20 feet, 2 foot intervals if the relief is less than 20 feet, or an interval of 2 feet, if relief is less than 20 feet). Owners and operators of hazardous waste management facilities located in mountainous areas should use larger contour intervals to adequately show topographic profiles of facilities. The map must also include the following:
22CCR 66270.14(b)(18)

1. Map scale and date.

2. 100-year floodplain area.

3. Surface waters including intermittent streams.

4. Surrounding land uses (residential, commercial, agricultural, recreational).

5. A wind rose (e.g., prevailing wind-speed and direction).

6. Orientation of the map (north arrow).

7. Legal boundaries or the hazardous waste management facility site.

8. Access control (fences, gates).

9. Injection and withdrawal wells both onsite and offsite.

10. Buildings; transfer, treatment, or storage operations; or other structure (recreation areas, run-off control systems, access and internal roads, storm, sanitary and process sewerage systems, loading and unloading areas, fire control facilities, etc.).

11. Barriers for drainage or flood control.

12. Location of operational units within the hazardous waste management facility site, where hazardous waste is (or will be) transferred, treated, or stored (include equipment cleanup areas).

Throughout the Standardized Permit Application, there will be requests for information to be shown on design drawings, diagrams, plans, etc. The following is a listing of the minimum necessary plans, diagrams, and drawings that will be required to be included. In order to consolidate information, if possible, use one type of diagram or plan for the entire application rather than a separate one for each section. For example, the piping layout can be used for information requested in the container section and the tank section rather than a separate piping layout for each section.

Process Flow Diagram showing the path of each waste stream from the point of entrance into the facility to its exit from the facility. The process flow diagram should include each point where the waste stream physically and/or chemically changes and show points where samples are collected (sampling points will be indicated in the waste analysis plan). Also show any equipment that is used to move the waste stream such as pumps, blowers, belts, etc.

Piping Layout, to scale, showing all piping throughout the facility connecting tanks, containers, treatment units, etc. Show all pipe sizes (inner and outer dimensions), pipe material, pumps, valves, flanges, and any other applicable ancillary equipment. Show any sampling points and valves.

Facility Plot Plan, to scale, showing the general layout of the facility. This plan shall show the following, if applicable:

- Legal property boundaries of the facility.
- All buildings and areas such as secondary containment, occupied by all storage and treatment units.
- Include the name of each operation (e.g., precipitation tank, drum storage area, etc.).
- The approximate dimensions of the property boundaries and of each storage and treatment area.
- Security provisions (e.g., fences, gates, etc.).
- Permanent access and internal roads.
- On and offsite traffic to include: estimated volume, types of vehicles, traffic patterns, control methods, control signals.
- Power lines, pipelines, easements.
- Buffer zones.
- Storm water management (e.g., storm drains, sewer access, drainage control).

B. LEGAL DESCRIPTION OF PROPERTY

Furnish a written legal description of the property occupied by the facility for which clear title is held. A legal description can be obtained from the local county recorder or from a title company. 22CCR 66270.14(b)(18)(G)

SECTION III - WASTE ANALYSIS PLAN

INTRODUCTION

A waste analysis plan describes the procedures that will be undertaken to obtain sufficient waste information to operate a hazardous waste management facility in accordance with all applicable regulations. The plan ensures that wastes accepted by facilities which transfers, treats, or stores any hazardous waste, fall within the scope of the facility's permit and that the process performance standards are met. This Waste Analysis Plan Guideline for Standardized Permits was developed in accordance with the according to Title 22, California Code of Regulations (22 CCR) Section 66265.13.

STANDARDIZED PERMIT FACILITIES

For all facilities applying for standardized permit, indicate all sampling locations on the Process Flow Diagram and the Piping Layout, and complete Tables 2 through 7 for each of the events listed below (if applicable).

- Waste streams entering the facility - Ensure that waste received at the facility matches the accompanying manifest, shipping paper, or container labeling.

- Waste streams created within the facility - Determine the identity and characteristics of additional waste streams created from the facility process, including process effluent.

- Trial test for container or tank - A trial test is to be used when a hazardous waste is stored or treated in a tank system that is substantially different from waste previously treated or stored in that container or tank system. A trial test will be conducted to ensure compatibility with between the residual from the previous waste and the waste to be treated (22 CCR 66265.13(b)(6), 22 CCR 66265.200).

- Trial test for container or tank system - A trial test is to be used when a substantially different process is used, to treat a hazardous waste, than previously used in that container or tank system. A trial test will be conducted to ensure compatibility with between the residual from the previous waste and the waste to be treated (22 CCR 66265.13(b)(6), 22 CCR 66265.402).

- Secondary Containment - Method or test to detect a release into and from the secondary containment (22 CCR 66265.13(b)(6), 22 CCR 66265.193).

- Thermal Process - Facilities operating thermal processes must sufficiently analyze any waste which has not been previously treated in that thermal process to enable the facility to establish steady state (normal) or other appropriate (for a non-continuous process) operating conditions (including waste and auxiliary fuel feed) and to determine the type of pollutants which might be emitted. At a minimum, the analysis

must determine: (1) heating value of the waste; (2) halogen content and sulfur content in the waste; and (3) concentrations in the waste of lead and mercury, unless submitted documented data shows that the element is not present (22 CCR 66265.13(b), 22 CCR 66265.375).

- Air Emission Standards for Process Vents - Facilities with process vents associated with distillation, fractionation, thin-film evaporation, solvent extraction, or air or steam stripping operation, must show with an initial determination that the time-weighted, annual average total organic concentration of the waste managed by the waste management unit is less that 10 ppmw by using one of the two methods described in 22 CCR 22265.1034(d) in order to be exempt from requirements set forth in 22 CCR Chapter 15, Article 27 (22 CCR 66265.13(b)).

- Air Emission Standards for Equipment Leaks - Facilities shall determine for each piece of equipment, whether the equipment contains or contacts a hazardous waste with organic concentration that equals or exceeds 10 percent by weight by using the following: (1) ASTM methods D2267-88, E 169-87, E 168-88, E 260-85 (incorporated by reference under 22 CCR 66260.11); (2) EPA methods 9060 or 8240 of SW-846 (incorporated by reference under 22 CCR 66260.11); (3) application of the knowledge of the nature of the hazardous waste stream or the process by which it was produced (22 CCR 66265.13(b), 22 CCR 66265.1063(d)).

In order to complete Tables 2 through 8, written instructions are provided below. Multiple copies of the blank Tables 2 through 7 may be needed.

Table 2: Description of Wastes

The objective of Table 2 is to identify each waste stream with a common name, Federal and State waste code, general characteristics and processes producing the waste. Fill out each column according to the instructions below.

Column (1): Identify each hazardous waste stream from which samples are collected and analyzed with a Waste Stream Letter (ie. Stream A, B, C, D) . For example if a facility transports used motor oil and solvents, the used motor oil can be identified as Waste Stream A, and the used solvents can be identified as Waste Stream B. Waste streams created during the facility process should also be identified with a Waste Stream Letter. The same Waste Stream Letter will be used throughout the Waste Analysis Plan (Tables 2 through 7).

Column (2): Identify the common hazardous waste name for each waste stream. The common hazardous waste name should be consistent with each Waste Stream Letter (identified in Column 1) throughout the Waste Analysis Plan (Tables 2 through 7).

Column (3): Identify the United States Environmental Protection Agency (USEPA) Hazardous Waste Code for each waste stream, if applicable.

Column (4): Identify the California Waste Code for each waste stream.

Column (5): Provide a general description of the hazardous waste in each waste stream (i.e. crankcase and lubricating oil, solvents, fixer).

Column (6): Describe the processes which generated the hazardous waste in each waste stream.

Table 3: Physical Properties of Waste

The objective of Table 3 is to identify the physical properties of the waste. Fill out each column according to the instructions below.

Column (1): Identify each waste stream with a Waste Stream Letter (i.e. A, B, C...) as defined in column 1 of Table 2.

Column (2): Identify the common hazardous waste name for each waste stream as defined in Column 2 of Table 2.

Columns (3) through (5):
Identify the specific gravity, pH, and flash point of each waste stream.

Table 4: Hazardous Properties of Waste

The objective of Table 4 is to identify the hazardous properties, ignitability, corrosivity, reactivity, toxicity and incompatibility, of each waste stream. Fill out each column according to the instructions below.

Column (1): Identify each waste stream with a Waste Stream Letter (ie. A, B, C...) as defined in column 1 of Table 2.

Column (2): Identify the common hazardous waste name for each waste stream as defined in Column 2 of Table 2.

Column (3): Identify the hazardous constituent(s) in each waste stream.

Columns (4) through (7):
If applicable, list the properties which would cause the waste stream to be ignitable, corrosive, reactive, or toxic according to 22 CCR 66261.20 through 66261.24.

Column (8): List the containers and other waste streams at the facility which are incompatible with each waste stream, according to 22 CCR 66260.10.

Table 5: Sampling and Analysis of Waste

The objective of Table 5 is to identify and justify all field and laboratory analyses performed and sampling procedures used on each waste stream. Include all analyses performed on waste streams entering the facility, waste streams produced within the facility, trial tests, and all other additional analyses which the facility performs for other reasons. Analyses which the reader mentioned in Table 4 should also be addressed in more detail here.

Question 1.: Identify the waste stream with a Waste Stream Letter (ie. A, B, C...) as defined in column 1 of Table 2.

Question 2.: Identify the common hazardous waste name for the waste stream as defined in Column 2 of Table 2.

Question 3.: Identify the constituents or properties which the waste stream is being analyzed for (ie. Flash Point, concentration).

Question 4.: Indicate the Analytical Method Used to analyze the constituents or properties identified in Question 3 (ie. EPA method 1020 for Flash Point)

Question 5.: Identify the Detection Limit for each analytical method identified in Question 4 (ie. <1 ppm).

Question 6.: Identify the purpose of the analysis (ie. for Land Disposal Restrictions).

Question 7.: Identify if the sample was analyzed onsite or offsite.

Question 8.: Identify if the sample is a grab sample or a composite sample.

Question 9.: Identify the Sample Frequency for each analysis performed (ie. at each pickup).

Question 10.: Identify the Sample Location for each analysis performed (ie. at each 55 gallon drum). The sample location should be shown on the process flow diagram (requested in Table 2).

Question 11.: Describe the Sampling Procedure to be used to collect each sample. The discussion of the Sample Procedure should include all activities from the collection of the sample to the point at which the sample is analyzed. Include the equipment used to collect each sample (i.e. bailer, thief) and the containers used to contain each sample (i.e. 40 ml VOAs, plastic bottle).

Question 12.: For each analysis performed, explain the rationale for the responses to questions 8 through 11 on Table 5. The rationale should also include how the waste stream is handled based on the results of the analyses (i.e. the waste is homogeneous, therefore only one grab sample is needed from each 55 gallon drum; a glass thief is the most effective tool to collect the sample; glass bottles are used because the sample is incompatible with plastic bottles; if the sample contains PCBs, the 55 gallon drum is not processed by the facility and is disposed of as hazardous waste.)

Question 13: Explain the procedure for verifying the accuracy or validity of the sampling results (i.e. onsite sampling and analysis is verified by periodically sending split samples to a certified lab to confirm the onsite analytical results; offsite sampling results are verified by sending split samples to two different labs at least once per month).

Table 6: Treatment Standards

Resource Conservation and Recovery Act (RCRA) wastes and non-RCRA wastes that are hazardous are subject to California's Land Disposal restrictions (LDR). However, if a hazardous waste is not destined for land disposal, it is not subject to the treatment standards but the notification and record keeping requirements still apply. The objective of Table 7 is to

fulfill the notification and record keeping requirements of California's LDRs. Fill out each column according to the instructions below.

Column (1): Identify each waste stream with a Waste Stream Letter (ie. A, B, C...) as defined in column 1 of Table 2.

Column (2): Identify the common hazardous waste name for each waste stream as defined in Column 2 of Table 2.

Column (3): Indicate the U.S. EPA and/or California waste codes.

Column (4): Indicate the applicable LDR waste codes or category.

Column (5): Indicate if the waste is a liquid or solid.

Column (6): Indicate the hazardous constituent name.

Column (7): Indicate the designated treatment standard concentration for both RCRA and non-RCRA hazardous wastes in the waste stream, if applicable.

Column (8): Indicate test methods used, if applicable.

Column (9): Indicate if the sample is a grab sample or a composite sample, if applicable.

Column (10): List the designated treatment standard technology for RCRA hazardous wastes in the waste stream, if applicable.

Table 7: Quality Assurance and Quality Control

The objective of Table 7 is to ensure quality assurance and quality control (QA/QC) of the waste analysis plan. A proper QA/QC program includes verification of the generator's waste description and verification of the applicability of the waste analysis plan. If the waste streams change over time, it must be determined whether or not the Waste Analysis Plan is still applicable to the changed waste stream.

Table 1
Waste Analysis Plan for
Permanent Household Hazardous Waste Collection Facilities
(ONLY TO BE COMPLETED BY PERMANENT HOUSEHOLD HAZARDOUS WASTE COLLECTION FACILITIES)

List below the hazardous wastes which the facility will not intentionally accept.

Hazardous Waste Name	U.S. EPA Code	California Waste Code

If the container received from the public is labeled, describe the procedure for verifying that the label and waste match.

If the container received from the public does not have a label, describe the procedure for identifying the contents of the container (i.e. HAZCAT).

Describe how the waste is sorted, segregated, and stored from the moment the waste enters the facility until it is removed from the facility.

Table 2
Description of Waste

(1)	(2)	(3)	(4)	(5)	(6)
Waste Stream Letter	Common Name of Hazardous Waste	U.S. EPA Code (22CCR 66261.20 to 66261.126)	California Waste Code (22CCR 66261.126 Appendix XII)	Description of Waste	Process Generating Waste
Example A	Example Fixer	Example D011	Example 541	Example Spent silver-bearing photo and x-ray developing waste solutions.	Example Photo, printing and x-ray developing industry.

Table 3
Physical Properties of Waste

(1) Waste Stream Letter	(2) Common Name of Hazardous Waste	(3) Specific Gravity	(4) pH	(5) Flash Point
Example A	Example Fixer			

Table 4
Hazardous Properties of Waste

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Waste Stream Letter	Common Name of Hazardous Waste	Hazardous Constituent(s) in Waste Stream	List the properties which would characterize the waste stream as being ignitable, corrosive, reactive, or toxic.				Incompatibility with other waste streams and containers
			Ignitability (22 CCR 66261.21)	Corrosivity (22 CCR 66261.22)	Reactivity (22 CCR 66261.23)	Toxicity (22 CCR 66261.24)	
Example A	Example Fixer	Example Silver	Example none	Example none	Example none	Example Bioaccumulative. Concentration of hazardous constituent it greater than the Regulatory Limit as per 22 CCR 66261.24.	Example None

EXAMPLE Table 5
Sampling and Analysis of Waste
(A blank table is provided.)

WASTE STREAM INFORMATION	
Waste Stream Letter: Example: A	Common Name of Hazardous Waste: Example: Fixer
ANALYSIS INFORMATION	
Constituent(s) Analyzed: Example: Silver	Analytical Method Used: Example: EPA 200 series
Detection Limit: Example: 0.01 mg/L	Purpose of Analysis: Example: To meet sanitary sewer discharge requirements
Analysis performed onsite or offsite: Example: Offsite	
SAMPLING PROCEDURE	
Identify if grab sample or composite sample: Example: grab	Sampling Frequency: Example: once per month
Sample Location: Example: At the discharge to the sanitary sewer	
Describe sampling procedure: Example: A 100 ml of the treated waste will be collected from a sampling valve between the process system and the discharge to the sanitary sew location on Process Flow Diagram). Opening the sampling valve releases effluent directly into a plastic bottle located underneath the sampling valve sample will be preservative, with Nitric Acid, HNO3. The sample will then be shipped via private courier to a California State Certified analytical labo with proper Chain-of-Custody paper work.	
Explain rationale for responses to Questions 8 though 11. Example: The waste is homogeneous, therefore only one grab sample is needed. A sample is collected once per month as per requirements set by sanitary sewer system. The sampling valve requires no additional equipment to collect a sample. If the analytical results indicate that the silver limi the sanitary sewer has been exceeded, then all operations will stop until the facility can demonstrate that the sanitary sewer limits can be met.	
Explain procedure for verifying the accuracy or validity of the sampling results. Example: Once every 3 months duplicate samples will be sent to two California State Certified analytical laboratories to verify sampling and analysis.	

Table 5
Sampling and Analysis of Waste

WASTE STREAM INFORMATION	
Waste Stream Letter:	Common Name of Hazardous Waste:
ANALYSIS INFORMATION	
Constituent(s) Analyzed:	Analytical Method Used:
Detection Limit:	Purpose of Analysis:
Analysis performed onsite or offsite:	
SAMPLING PROCEDURE	
Identify if grab sample or composite sample:	Sampling Frequency:
Sample Location:	
Describe sampling procedure:	
Explain rationale for responses to Questions 8 though 11.	
Explain procedure for verifying the accuracy or validity of the sampling results.	

Table 6
Treatment Standards (22 CCR Chapter 18)

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Waste Stream Letter	Common Name of Hazardous Waste	U.S. EPA and/or California Waste Codes	Applicable LDR Waste Codes or Category (22CCR 66268.29)	Is Waste Liquid or Solid	Designated Treatment Standards (For RCRA wastes 22 CCR 66268.41 through 66268.43 For non-RCRA wastes 22CCR 66268.105 through 66268.113)				
					Constituent	Concentration (mg/L)	Analytical Method Used	Grab or Composite Sample	Technology
Example	Example	Example	Example	Example	Example	Example	Example	Example	Example
A	Fixer	D011	D011	Liquid	Silver	5.0	TCLP	Grab	none
		CWC 541	Aqueous wastes with metals.	Liquid	Silver	5.0	WET	Grab	none

Notes:
nd Disposal Restrictions.
Resource Conservation Recovery Act of 1972.
non-RCRA = California waste.
mg/l = milligrams per liter.

Table 7
Quality Assurance and Quality Control

Explain the procedure used to ensure that only waste approved in the Standardized Permit is received and processed at the facility. If the facility us waste profile sheet for waste received at the facility, attach a copy of the waste profile sheet.

Example: A copy of our facility's waste profile sheet to be completed by facility employees is attached. The generator provides MSDS sheets for the fixer in addition to a waste profile sheet completed by the generator.

Describe the procedure to determine if the waste stream has changed over time, and the procedure to determine if the Waste Analysis Plan is still ap to the changed waste stream.

Example: Once a year, the MSDS sheets supplied by the generator and the process used by the generator will be reviewed to determine if there are changes from the previous year. If changes are made with the generator's process, then the process within the facility will be reviewed to ensure t Waste Analysis Plan is still applicable. If significant changes are needed within the facility which affect the permit, then the Department will be notifie

SECTION IV - FACILITY DESIGN (CONTAINERS)

A. CONTAINERS

Are or will containers be used to transfer, treat, or store hazardous waste?
YES_____ NO_____. If yes, complete this section (IV).
If more than one type of container is or will be used at the facility, photocopies of this page can be used for listing each type. Throughout these instructions, if there is not sufficient room for the information requested, please attach additional sheets.

1. Give the following information about the containers used to transfer, treat, or store hazardous waste:
   22CCR 66270.14(b)(19), 66265.170

   a. Type of container (e.g. metal drums, polypropylene drums, plastic buckets, etc.).

   b. Total number of this type of container.

   c. Markings and labels used for these containers to identify the hazardous waste contents and properties.

   d. Materials of construction.

   e. Dimensions and volumes.

   f. DOT specifications or other manufacturer specifications.

   g. Liner specifications (if applicable).

2. Give the following information about the hazardous waste that is or will be treated or stored in each of the above containers:
22CCR 66270.13(j), 66270.14(b)(19)

   a. Common name(s):

   b. EPA hazardous waste number(s):

3. If overpacking material is or will be used, give the common name of the material used in each container.
22CCR 66270.14(b)(19)

B. DOCUMENTATION OF CONTAINERS

Is or will hazardous waste be transported in containers?
YES_____ NO_____. If yes, complete this subsection (B).

Show that the containers meet appropriate DOT packaging regulations under Title 49 CFR Parts 173, 178, and 179 for use with the hazardous waste to be transported.
22CCR 66262.30

C. OPERATION PROCEDURES FOR STORAGE AND USE OF CONTAINERS

1. Describe how hazardous wastes inside of containers in poor condition are or will be transferred into good containers or otherwise managed (e.g., overpacked), to prevent any spills, leaks or releases.
22CCR 66270.14(b)(19), 66264.171, 66265.171

2. To ensure compatibility of waste with containers, give the following information:

   22CCR 66270.14(b)(19), 66264.172, 66265.172

   a. Identify the hazardous waste in each type of container.

   b. For each type of container and liner (if applicable), include information from manufacturer's specification, scientific and engineering references to show that the containers, liners or coatings are compatible with the hazardous wastes contained inside.

   c. What information will be posted on the outside of each container to warn against the container being used with any incompatible hazardous wastes?

3. Does or will the facility make sure that hazardous waste containers are always kept closed during movement and storage, except when adding or removing hazardous waste?
   YES_____ NO_____. If no, explain why containers are or will not be kept closed.
   22CCR 66264.173, 66265.173

4. Does or will the facility make sure that hazardous waste containers will not be opened, handled, moved, or stored in a manner which may rupture the container or cause it to leak?
   YES_____ NO_____. If no, explain.
   22CCR 66264.173, 66265.173

5. Does or will the facility have incompatible wastes?
YES_____ NO_____. If yes, give the following information regarding incompatible wastes:
22CCR 66264.177, 66265.177

   a. Describe how the facility does or will make sure that any incompatible hazardous wastes are not unknowingly placed inside of the same hazardous waste container (e.g., cleaning empty containers, labeling/marking, etc.).

   b. Describe how incompatible hazardous wastes or other materials are or will be separated by means of a dike, berm, wall, or other device.

6. For contaminated containers, give the following information:
22CCR 66270.14(b)(19), 66261.7

   a. Does or will the facility ensure that hazardous waste containers no longer being used or capable of being used to store hazardous waste are handled as hazardous waste and are properly disposed?
   YES_____ NO_____. If no, explain why the containers are or will not be handled as hazardous waste and properly disposed.

b. Does or Will the facility ensure that hazardous waste containers and/or any inner liners which have been removed from hazardous waste containers are completely emptied and then appropriately managed or disposed?
YES____ NO_____. If no, explain how the empty containers or liners are or will be managed or disposed.

Are or will any containers be kept outside ?
YES_____ NO_____. If yes, give the following information:

7. Describe the measures taken to protect hazardous waste containers that are subject to corrosion or deterioration from the weather (e.g. roofs, tarps, awnings, and elevation of containers above ground surface).
66270.14(b)(19), 66270.15(a)(2)

D. SECONDARY CONTAINMENT SYSTEM FOR CONTAINERS

Do or will container treatment or storage areas have secondary containment?
YES_____ NO_____. If yes, complete this subsection and the following subsection (E.).

If the facility has or will have more than one secondary containment system for containers, photocopies of this section can be used for each distinct system and additional sheets may be used if more room is needed.

1. Describe the containment system giving the following information:
22CCR 66270.14(b)(19), 66270.15(a), 66264.175

   a. Materials and method of construction (e.g., poured slab).

   b. Dimensions: Length_____ Width_____.

   c. If concrete, thickness of base_____.

   d. Is the containment area bermed?
   YES_____ NO_____.
   If yes, give dimensions and composition of berm:

      (1) Composition of berm:

      (2) Height_____ Width_____.

   e. Does the secondary containment area have a coating or liner?
   YES_____ NO_____.
   If yes, describe the type of coating or liner used and include a copy of manufacturer's specifications which list coating or liner compatibilities and/or incompatibilities.

   f. If it is an existing unit, does the base, coating, or liner have any cracks or gaps?
   YES_____ NO_____.
   If yes, describe the cracks or gaps (size, depth, etc.) and explain how they will be repaired.

2. Provide plan (looking down) and profile (view from the side) drawings of the existing or planned container storage area(s), showing the secondary containment system including any sumps, pumps, piping, etc. If applicable, indicate on the drawings the areas in which incompatible hazardous wastes will be stored. In addition, supply the following:

22CCR 66264.175(b)

g. Is the base sloped?
YES_____ NO_____.
If yes, show slope on the profile drawings.

h. Are containers elevated to prevent contact with any accumulated liquid?
YES_____ NO_____.

i. Does the containment system have a sump for collection of accumulated liquids?
YES_____ NO_____.

j. Describe how the container storage area is designed and operated to drain and remove liquids resulting from leaks, spills, or rainfall in as timely a manner as necessary to prevent overflow of the containment system.

k. Is or will the secondary containment system (base, berms, sumps, liners) be impervious to wastes and rainfall? YES_____ NO_____.
If no, explain the measures that the facility will take to make it impervious.

l. How does or will the facility ensure compatibility of the secondary containment system with wastes?

Is or will the secondary containment area(s) be exposed to rainfall? YES_____ NO_____.

2. The secondary containment system must be able to store ten (10) percent of the total volume of all containers or 100 percent of the volume of the largest container, whichever is the greatest amount plus rainfall from a 24-hour, 25-year storm. **Rainfall data can be obtained from the Dept. of Water Resources, Office of the State Meteorologist, Phone (916) 653-7237.** Provide calculations which demonstrate that the containment system will have the required sufficient capacity for holding the greatest volume. In addition, include the following information:
22CCR 66264.175(b)(3)

   a. The volume of the largest container that will be in this containment area (gallons).

   b. The total volume of all containers that will be in this containment area (gallons).

   c. Secondary containment structure total volume (gallons).

Is or will the containment area be exposed to surface run-on due to rainfall, drainage, etc.?
YES_____ NO_____. If yes, give the following information:

3. Describe how surface water run-on into the secondary containment system will be prevented, unless the collection system has sufficient excess capacity in addition to that required in the previous question (3.) to contain any surface water run-on that might enter the collection system. In addition, include the following information: 22CCR 66264.175(b)(4)

Describe (dimensions, material, etc.) any dikes, berms, trenches, drainage systems, etc., that are or will be used to prevent surface water run-on **or** provide calculations using a base 24-hour, 25 year storm to demonstrate that the secondary containment system has sufficient excess capacity to contain surface water run-on.

4. Describe the test procedures, equipment, and container management practices that are or will be used to ensure that any accumulated liquids from spills, leaks, ruptures, or rainfall are promptly analyzed for hazardous wastes and pumped, drained or removed from the collection area or sump to prevent any overflow of the secondary containment system.
22CCR 66264.175(b)(5)

Is or will there be a secondary containment system for the hazardous waste loading and unloading areas?
YES_____ NO_____. If yes, is or will it be separate and distinct from any other secondary containment system?
YES_____ NO_____. If yes, give the following information:

5. Provide plan and profile drawings of the secondary containment system for hazardous waste loading and unloading areas and give all of the applicable information that is requested in subsection D.1. through D.5.
22CCR 66270.14(b)(19) 66264.175

6. Give the following information concerning spacing and layout of containers: 22CCR 66270.14(b)(19), 66265.35

   a. Indicate the minimum aisle space that is or will be maintained between rows of containers for safe movement of personnel and equipment.

   b. Give the maximum number, volume (cubic feet or gallons), and stacking height of containers for each area in which hazardous waste containers are or will be stored.

E. CERTIFICATION OF CONTAINMENT SYSTEM

Provide a certified statement signed, dated, and stamped by an independent, qualified professional engineer registered in California, that indicates that the containment system and appurtenant structures for containers is suitably designed to achieve the requirements of subsection D., Secondary Containment System for Containers. Included in the engineer's certification shall be plan and profile drawings of the containment system area with dimensions shown. Also, include all calculations used in the analysis of the containment system and the following information:
22CCR 66270.14(a), 66264.175, 67800.1(c)(2) & (e)(2)

1. Name of registered engineer, registration number, and engineering discipline.

2. Date of expiration of the engineer's registration.

F. TREATMENT IN CONTAINERS

Is or will treatment be done in containers?
YES_____ NO_____. If yes, complete this subsection (F.)

If there is more than one type of treatment in containers, this section can be photocopied. Additional sheets may be attached if needed.

1. Describe each treatment process and include plan and profile drawings for each existing or planned treatment process unit and associated treatment equipment showing any valves, plumbing, pumps, process flow direction, etc. 22CCR 66270.14(b)(19)

   a. Dimensions and volumes of treatment process units.

   b. Specifications for any existing or planned treatment process unit (manufacturer's specifications if available).

c. The materials of construction for each treatment process unit.

d. Method of construction for any treatment process unit (e.g., welded, cast, molded, etc.).

e. Information concerning operation of treatment process units (e.g., manual, automatic, instrumentation, etc.).

2. **Chemical treatment processes:** Describe in detail all of the chemical treatment processes that are or will be done in containers (e.g., oxidation/reduction, pH modification, precipitation, etc.). If more than one type of chemical treatment process is used at the facility, photocopies of this page can be used for listing each type. The description should include but not be limited to the following:
22CCR 66270.14(b)(19)

a. Equipment used.

b. Chemicals added.

c. Process type (e.g., batch, continuous, etc.).

d. Feed rate (e.g., gal/min., lb/hr., etc.).

e. Chemical reactions.

f. Products and by-products for each chemical treatment process.

3. **Physical treatment processes:** Describe in detail all of the physical treatment processes that are or will be done in containers (e.g., separation, distillation, evaporation, etc.). If more than one type of physical treatment process is used at the facility, photocopies of this page can be used for listing each type. The description should include but not be limited the following: 22CCR 66270.14(b)(19)

a. Equipment used.

b. Chemicals added.

c. Process type (e.g., batch, continuous, etc.).

d. Feed rate (e.g., gal/min, lb/hr, etc.).

e. Products and by-products for each of the physical treatment processes.

4. For any treatment unit, furnish sampling data that shows the effectiveness of the treatment. This data should be based on sampling of untreated incoming hazardous waste and waste after treatment. The samples must be tested at a California state certified analytical laboratory.

5. Provide the following information concerning prevention of releases to the environment:
22CCR 66270.14(b)(8),

a. Describe how the facility does or will prevent any releases of hazardous waste from reaching either the subsurface soil or the groundwater.

b. Describe how the facility does or will prevent any releases of hazardous waste from reaching either surface soils, surface water or wetlands.

c. Describe how the facility does or will prevent any releases of hazardous waste from reaching the air.

Are there any containers used as treatment units that are located outside of secondary containment areas?
YES_____ NO_____. If yes, give the following information:

6. Provide the following assessments and maps:
22CCR 66270.23(b), 66270.14(b)(19)

a. Depth to groundwater below facility site and surrounding area.

b. Detailed information on the subsurface geology for the facility.

c. Detailed information on meteorologic assessment for the facility (annual rainfall data).

d. Land-use maps for the facility.

G. IGNITABLE, CORROSIVE OR REACTIVE WASTE

Does or will the facility transfer, treat, or store ignitable, corrosive, or reactive waste?
YES_____ NO_____. If yes, give the following information:

1. On the facility plot plan, show the locations where containers holding ignitable or reactive hazardous wastes are or will be stored at the facility and their protective distances or buffer zone of at least 50 feet from the facility's property line.
22CCR 66265.176, 66270.15(b)

2. Describe the precautions taken by the facility to prevent reactions involving ignitable or reactive wastes which would result in any of the following: 22CCR 66270.14(b)(9), 66265.17

   a. Generate extreme heat or pressure, fire or explosions, or violent reactions.

   b. Produce uncontrolled flammable fumes, dusts, or gases in sufficient quantities to threaten human health or the environment.

   c. Produce uncontrolled flammable fumes or gases in sufficient quantity to pose a risk of fire or explosions.

   d. Damage the structural integrity of the container or the facility.

   e. Through other means threaten human health or the environment.

SECTION V - FACILITY DESIGN (TANKS)

A. TANKS

Are or will tanks be used to transfer, treat, or store hazardous waste?
YES_____NO_____. If yes, complete this section V.

If more than one type of tank is or will be used at the facility, use copies of the applicable pages of this section for each type. If there is not enough room for the information requested, attach additional sheets.

1. Describe each existing or new tank. Include manufacturer's specifications and/or scientific and engineering references and drawings, if available. (22 CCR 66265.191(b)).

   a. Provide the following manufacturer's design specifications for each tank: (22 CCR 66265.191 & 194, 66270.14(b)(19), & 66270.16(a) - (b)).

      (1) Internal and/or external dimensions in feet and inches. (22 CCR 66265.191(b)(1)).

      Internal Dimensions.

      External Dimensions.

      (2) Internal design capacity in gallons. (22 CCR 66265.191(b)(1)).

      Capacity.

      (3) Shell thickness such as wall, top, and bottom in inches. (22 CCR 66265.191(b)(1)).

      Wall.

      Top.

      Bottom.

      (4) Operating pressure of the tank in psi from daily operating records, if applicable.
      (22 CCR 66265.191(b)(1)).

      Pressure.

(5) Manufacturer's design specification for the tank structural support and installation.
(22 CCR 66265.191(b)(1)).

(6) Manufacturer's design specification for tank roof, if applicable (22 CCR 66265.191(b)(1)).

(7) Age of each tank (new or from the operating records of the facility). (22 CCR 66265.191(b)(4)).

(8) Operating temperature of each tank in degrees Fahrenheit (from design or from operating records). (22 CCR 66265.191(b)(5)(A)).

b. Provide a complete description of construction materials used for each tank (i.e., manufacturer's specification). (22 CCR 66265.191(b)(3), 66270.16(a) & (l)).

c. Is or will the tank be lined or coated?
YES_____NO_____. If yes, complete the following:

Describe the lining and/or coating material used inside or outside each tank from manufacturer's specifications or scientific or engineering specifications. In addition, include the following: (22 CCR 66265.191(b)(3), 66270.16(a) & (l)).

(1) Provide the interior lining material specifications and thickness, if applicable.

(2) Provide the exterior coating material specifications and thickness, if applicable.

d. Provide the engineer's assessment of the base foundation for each tank which considers full tank load, flotation or dislodgement of tank and frost heave. In addition include the following: (22 CCR 66265.193(c)(2), 66270.14(b)(19), 66270.16(a), & (k)).

(1) Describe the sub-foundation work and seismic reinforcement measures such as soil compaction, piles, etc.

(2) Provide information on the materials, methods of construction and imperviousness to hazardous waste.

(3) Describe the fire protection rating of the tank foundation from contractor's specifications, scientific and engineering references, if applicable.

(4) Is or will the tank be outdoors?
YES_____NO_____. If yes, provide the following:

Describe the measures taken to protect the tank foundation from cracking or eroding due to extreme weather conditions.

(5) Include a description and the calculations to show each tank and tank foundation was designed to withstand the stresses produced by the maximum earthquake in your areas seismic zone. Use the California Uniform Building Code to find the applicable seismic zone.

e. If existing, provide the date each tank was put into service and what is its expected useful life. (22 CCR 66265.191, 66270.14(b)(19) & 66270.16(l)).

Date put into service.

Expected Useful Life.

f. Was the tank used previously?
YES_____NO_____. If yes, provide the following:
Provide use data from operating records, if applicable: (22 CCR 66265.191 & 66270.16(1)).

Type of waste(S) or material(s) previously in tank.

Length of service.

B. PLOT PLAN, DRAWINGS, AND TANK SYSTEM INFORMATION

1. Modify the plot plan in section II to show tank information. In addition, provide the following detailed diagrams and drawings for each tank: (22 CCR 66265.191, 66265.194(b), & 66270.16)).

a. Locate each tank on facility plot plan in section II. (22 CCR 66270.14(b)(18)(L)).

(1) Indicate whether the tank is or will be entirely above ground, if applicable.

(2) Indicate whether the tank is or will be partially or entirely below ground, if applicable.

(3) Indicate whether the tank can or will be able to be entered for inspection and routine maintenance, if applicable.

(4) Indicate vertical or horizontal orientation of each tank on the plan with "V" and "H" respectively.

(5) Show the aisle space between tanks or between tanks and other equipment.

2. Does or will the tank(s) contain ignitable and/or reactive wastes? YES_____NO_____. If yes, complete the following:
Locate this tank(s) and its secondary containment system on facility plot plan. Show on the plan the minimum protective buffer distance required around each tank(s) in accordance with Table 2-1 through 2-6 of the National Fire Protection Association's "Flammable and Combustible Liquids Code". Data is available from the National Fire Protection Association, 1 Batterypark, Quincy, MA., 02267, Phone: (800) 344-3555. (22 CCR 66265.198(b)).

3. Does or will the tank(s) contain incompatible wastes? YES_____NO_____. If yes, complete the following:

   Locate this tank(s) and its secondary containment system on facility plot plan. Show on the plan the distances of separation between incompatible wastes and the locations of dikes, berms, or walls used to maintain the separation. (22 CCR 66265.199(a)).

4. Locate the secondary containment area for tank(s) on the facility plot plan. Include dimensions to calculate the surface area of the containment system. (22 CCR 66265.193(b)).

5. Locate secondary containment areas for hazardous waste loading, pumping and unloading areas on the facility plot plan, if applicable. (22 CCR 66265.199(a)).

6. Provide a piping layout diagram with individual pipe identification coding, if used. (22 CCR 66270.16(d)).

7. Provide piping and instrumentation diagrams that show process controls and locations of monitoring systems. Describe all instrumentation used and include all interlock systems. (22 CCR 66270.16(d)).

8. Include the following diagrams, if applicable: (22 CCR 66270.16)

   a. Provide process flow diagram(s) showing direction of flow. (22 CCR 66270.16(d)).

   b. Provide diagrams and design drawings for the feed system. (22 CCR 66270.16(c)).

   c. Is or will there be an overfill prevention system? YES_____NO_____. If yes, describe if the system has the following:

(1) Describe the automatic hazardous waste feed safety cutoff system, if applicable. (22 CCR 66265.194(b)(2)).

(2) Describe the manual hazardous waste feed safety cutoff system, if applicable. (22 CCR 66265.194(b)(2)).

d. Are or will the tanks be uncovered and outdoors? YES_____NO_____. If yes, provide the following for each tank:

Provide calculations to show that each open uncovered tank has or will have sufficient containment volume to hold the rainfall from a 24-hour, 25-year storm. Rainfall data can be obtained from the Department of Water Resources, Office of the State Meteorologist, Phone: (916) 653-7237. (22 CCR 66265.194(b)(3)).

9. Provide drawings to show the freeboard level for each tank. (22 CCR 66265.194(b)(3)).

10. Is there or will there be a bypass system to a standby tank or a backup plan to prevent overfill?
YES_____NO_____. If yes, provide the following:

Describe this system or the backup plan. (22 CCR 66265.194(b)(2)).

11. Are or will the tanks be airtight, pressurized or under vacuum? YES_____NO_____. If yes, provide the following:

Describe the pressure control and/or pressure release controls for closed tanks such as vents and relief valves. (22 CCR 66270.16(c)).

12. Are or will temperature controls be used in the tanks?
YES_____NO_____. If yes, provide the following:

Describe the temperature controls and temperature cutoff safety controls. (22 CCR 66270.16(c)).

13. Are or will liquid level indicators be used in tanks? YES_____NO_____.
If yes, provide the following:

Describe the liquid level measurement devices or indicators. (22 CCR 66265.194(b)(2)).

14. Do or will the tanks contain volatile hazardous wastes? YES_____NO_____.
If yes, provide the following:

Describe the pressure relief or tank venting and vapor control systems for these tanks. (22 CCR 66270.16(c)).

15. Are or will there be tank joints?
YES_____NO_____. If yes, provide the following:

Describe the types of joints and the condition of each joint. (22 CCR 66265.194(a)).

16. Are or will there be tank welds?
YES_____NO_____. If yes, provide the following:

Describe the condition of each weld. (22 CCR 66265.194(a)).

17. Are or will pumps, valves or interlocks be used?
YES_____NO_____. If yes, provide the following:

Include information for pumps, valves or interlocks used with each tank. (22 CCR 66265.194(a)).

a. Describe and provide manufacturer's specifications for each pump and valve.

b. Describe the safeguards used to prevent accidental releases from each pump and valve.

c. Indicate if valves fail in the open or closed position.

Open.

Closed.

d. What are the daily maximum and minimum pump rates for each pump, in gallons per minute (from design or from facility operating records).

Maximum pump rate.

Minimum pump rate.

18. Is or will the tank be outdoors and made of metal?
YES_____NO_____. If yes, provide the following:

Describe how each tank is protected from lightning. (22 CCR 66270.14(b)(19)).

19. Describe the operating features of the following devices and explain how they operate, if applicable. (22 CCR 66270.14(b)(19)).

    a. Design of feed or dip tubes.

    b. Siphon-prevention measures.

    c. Excess flow check valves or restrictors.

    d. Electrical grounding.

20. Are or will the following tank filling procedure be used to prevent releases? (22 CCR 66265.194(b)).

    a. Are or will the connection points for each tank be securely attached to prevent spills?
    YES_____NO_____.

    b. Are or will the operating conditions be carefully maintained to prevent releases to the environment? YES_____NO_____.

C. HAZARDOUS WASTE

1. Provide the name and describe the physical properties of each hazardous waste that is or will be stored or treated in each tank from manufacturer's specifications, scientific and engineering references. (22 CCR 66270.14(b)(2) & (3), 66270.16(a) & (j), 66265.13, 17, 191, 194(a) & (199)).

a. Common chemical name(s).

b. EPA and/or California hazardous waste number(s).

c. Specific gravity.

d. Vapor pressure, if applicable.

e. Storage temperature, if applicable.

f. Flame point/auto-ignition temperature, if applicable.

g. Expected number of layers when compatible hazardous waste with different specific gravities are stored together, if applicable.

h. Compatibility of hazardous wastes with tank materials of construction, and with liner and/or coating materials.

2. Provide a sample of label and/or marking used to identify the hazardous waste in each tank. (22 CCR 66270.14(b)(19)).

D. POLYCHLORINATED BIPHENYLS (PCB's)

Are polychlorinated biphenyls (PCB's) stored in tanks? YES_____NO_____.
If yes, provide the following:

Describe how tanks containing PCB's, ancillary equipment and secondary containment comply with the requirements of 40 CFR Part 761. (22 CCR 66270.14(b)(19)).

E. EXISTING TANK SYSTEMS WITHOUT SECONDARY CONTAINMENT

Does the existing tank system have secondary containment? YES_____NO_____.
If no, provide the following:

Provide the engineer's assessment and conduct leak test or other procedure for assessment required by 22 CCR 66265.193. In addition, include the following information: (22 CCR 66265.191(b)(5), 66265.193(i), 66270.16(a), (e), (k) & (l)).

1. Provide results of the most recent leak test, internal inspection or other tank integrity examination. (22 CCR 66265.193(i)).

2. Identify the design standards used to construct the tank (i.e., American Petroleum Institute (API) or equivalent). (22 CCR 66265.191(b)(1)).

3. Provide information on existing corrosion protection. (22 CCR 66265.191(b)(3)).

4. Provide an implementation schedule showing how the facility will meet the secondary containment requirements by the applicable deadlines of 22 CCR 66265.193. (22 CCR 66265.193(a) & 66270.14(b)(19)).

F. NEW TANK SYSTEM, NEW INSTALLATION, OR NEW COMPONENT(S)

Is this a new tank system, new installation, or new component? YES_____NO_____. If Yes, include the following: (22 CCR 66265.192).

1. Provide the engineer's assessment for new tanks. The assessment shall include, at a minimum, the following: (22 CCR 66265.192(a) & (g)).

   a. Provide the design standards each tank was constructed to (i.e., API or equivalent). (22 CCR 66265.192(a)(1)).

   b. Identify and provide information on the hazardous characteristics of the waste. (22 CCR 66261.20 - 24 & 66270.14(b)(19)).

(1) Common chemical name(s).

(2) Chemical Abstracts number.

(3) EPA and/or California hazardous waste number.

(4) Provide the Material Safety Data Sheet (MSDS), if available.

(5) Is the hazardous waste ignitable? (22 CCR 66261.21).

(6) Is the hazardous waste corrosive? (22 CCR 66261.22).

(7) Is the hazardous waste reactive? (22 CCR 66265.23).

(8) Is the hazardous waste toxic?
YES_____NO_____. If yes, describe why it is toxic. (22 CCR 66261.24).

c. Is the tank(s) metal, located outdoors and in contact with soil or water?
YES_____NO_____. If yes, provide the following: (22 CCR 66265.192(a)(3)(A)1 - 8).

(1) Provide the corrosion assessment performed by a corrosion expert that considers, at a minimum, the following: (22 CCR 66265.192(a)(3)).

(a) Soil moisture content.

(b) Soil pH.

(c) Soil sulfides level.

(d) Soil resistivity.

(e) Structure to soil potential.

(f) Is there cathodic influence of nearby underground metal?
YES_____NO_____. If yes, describe how this was dealt with.

(g) Is there a possibility of stray electric current? YES_____NO_____. If Yes, describe how this was dealt with.

(h) Are there existing corrosion protection measures? YES_____NO_____. If yes, describe the existing corrosion protection measures.

d. Provide the following information on the type and degree of corrosion protection: (22 CCR 66265.192(a)(3)(B)1-3).

(1) Are corrosion-resistant materials of construction such as, special alloys and fiberglass-reinforced plastics used? YES_____NO_____. If yes, provide this information.

(2) Are corrosion-resistant coating with cathodic protection, such as impressed current or sacrificial anodes used? YES_____NO_____. If yes, provide this information.

(3) Are electrical isolation devices, such as insulating joints, flanges etc. used? YES_____NO_____. If yes, provide this information.

e. Is or will the tank(s) be underground? YES_____NO_____. If yes, provide the following:

Provide design or operating measures used to protect the underground portions of tank systems against damage from vehicular traffic. (22 CCR 66265.192(a)(4)).

f. Provide the design standards and considerations used to ensure the following: (22 CCR 66265.192(a)(5)(A) - (C)).

(1) How the tank foundation was designed to support a full tank load?.

(2) How the tank system is or will be anchored to prevent flotation or dislodgement, if located in saturated zone or in seismic fault zone?

(3) How the tank system will withstand effects of frost heave?

g. Has any other agency certified the installation of this tank? YES_____NO_____. If yes or no provide the following:

If **yes**, provide the certification by the agency and the data on which the certification was based in lieu of this section.

If **no**, provide evidence of the inspection by an independent, qualified installation inspector or an independent, qualified professional engineer, registered in California, who supervised the installation. In addition, include the following: (22 CCR 66265.192(g)).

(1) Describe procedures used to prevent damage to the tank system during installation which include at a minimum the following: (22 CCR 66265.192(b)(1) - (6)).

(a) Were there any weld breaks? YES_____NO_____. If yes, how were they corrected?

(b) Were there any punctures?
YES_____NO_____. If yes, how were they corrected?

(c) Were there any scrapes of protective coating?
YES_____NO_____. If yes, how were they corrected?

(d) Were there any cracks?
YES_____NO_____. If yes, how were they corrected?

(e) Was corrosion found?
YES_____NO_____ If yes, how was it corrected?

(f) Was other damage from inadequate construction or installation found? YES_____NO_____. If yes, what were the damages and how were they corrected?

(2) Are or will the new tank system and components be buried underground?
YES_____NO_____. If yes, provide the following:

Describe the design considerations and procedures used to comply with the following backfill requirements for new underground tank systems and components: (22 CCR 66265.192(c)).

(a) Identify the backfill material.

(b) Is or will the backfill material be noncorrosive, porous, and homogeneous?
YES_____NO_____.

(c) Is or will the tank and components be completely surrounded with backfill?
YES_____NO_____.

(d) Is or will the backfill be compacted to ensure the tank and piping are fully and uniformly supported?
YES_____NO_____.

(3) Describe in detail the underground tank monitoring system which include the following: (22 CCR 66265.193(i), & 66265.195).

(a) Describe the methods used to ensure that tank interiors are visually inspected and the contents of the tank are measured, if applicable.

(b) Provide drawings and construction specifications for groundwater monitoring wells built around each tank, if applicable.

(c) Describe the type of leak detection system used to detect leaks, if applicable.

(4) Describe the methods used to test all new tanks and ancillary equipment for tightness before covering, enclosing or using the tank. (22 CCR 66265.192(d)).

(5) Describe how ancillary equipment is supported and protected against damage and excessive stress due to settlement, vibration, expansion, or contraction. (22 CCR 66265.192(e)).

(6) Were any corrosion protection systems field fabricated?
YES_____NO_____. If Yes, was the installation supervised by an independent corrosion expert?

YES_____NO_____. (22 CCR 66265.192(f)).

G. IGNITABLE, CORROSIVE, REACTIVE, OR INCOMPATIBLE HAZARDOUS WASTE

Is or will the hazardous waste be ignitable, corrosive, reactive or incompatible? YES_____NO_____. If yes, provide the following:

Describe the following management practices and procedures used to ensure safe operations in new and existing facilities. (22 CCR 66265.194, 66265.199 & 66265.17).

1. How do you prevent the mixing of incompatible wastes?

2. How do or will you prevent placing into tanks, wastes that are incompatible with the construction materials of the tanks?

3. How do or will you ensure that reactive or ignitable hazardous waste is treated, rendered or mixed immediately before placing in tanks.

4. How do or will you ensure that incompatible wastes are not stored in tanks within a minimum distance of 100 ft from onsite buildings and 50 ft from other tanks and containers?

5. How do or will you ensure that incompatible wastes and materials are not placed in the same tank unless mixing or commingling does not produce the following: (22 CCR 66265.199(a) & 66265.17(b)(1) - (5)).

    a. Does not generate extreme heat or pressure, fire, explosion or violent reaction?

b. Does not produce uncontrolled toxic mists, dusts, or gases in sufficient quantities to threaten human life or the environment?

c. Does not produce uncontrolled flammable fumes or gases in sufficient quantities to pose a risk of fire or explosion?

d. Does not damage the structural integrity of the tank or the facility?

e. Does not through other means threaten human health or the environment?

6. How do or will you ensure that ignitable wastes are protected from all sources of ignition? (22 CCR 66265.17(a)).

7. How do or will you ensure that any ignitable or reactive waste is tested, treated, rendered, mixed or stored in such a manner that the waste is protected against accidental ignition or reaction?

8. How do or will you ensure that tanks are tested in accordance with the National Fire Protection Association Pamphlet 329, "Recommended Practices for Handling Underground leakages of Flammable and Combustible Liquids" before the tanks are covered, enclosed or used. Refer to section V.B.2. for NFPA address and phone number. (22 CCR 66270.14(b)(19)).

H. SECONDARY CONTAINMENT

Does or will the tank system have secondary containment? YES_____NO_____.
If yes, complete this section.

Describe the secondary containment system for tanks showing dimensions, construction materials, and location on the plot plan of Section II. Note: Tank systems containing no free liquids and that are situated inside a building with an impermeable floor are exempt from secondary containment requirements in accordance with 22 CCR 66265.190(a). (22 CCR 66265.193 & 66270.16(g)).

1. Provide the following information for the secondary containment system: (22 CCR 66265.193(b)).

   a. Dimensions.

      Length.

      Width.

      If non-rectangular, total surface area.

      Total secondary containment volume.

   b. Materials and method of construction (e.g., poured slab):

      Materials of construction.

      Methods of construction.

   c. If concrete:

      Thickness of base.

      Thickness of the footing, if applicable.

   d. Is or will the containment area be bermed?
      YES_____NO_____. If yes, provide the following:

      Provide dimensions, composition of the berm and a cross-sectional view of the berm and foundation:

      Composition of berm.

      Height.

      Width.

   e. Is or will the containment area be lined or coated? YES_____NO_____
      If yes, provide the following:

Provide a copy of the manufacturer's specifications which shows liner or coating compatibilities. (22 CCR 66265.193(c)(1)).

f. If it is an existing unit, does the base, liner or coating have any cracks or gaps?
YES_____NO_____. If yes, describe how you prevent releases to the environment?

g. Is or will the secondary containment be subject to pressure gradients?
YES_____NO_____. If yes, describe the pressure gradients anticipated and included in the design.

h. Is or will the secondary containment be impervious to waste?
YES_____NO_____. If yes, describe how the containment system is impervious to waste.

i. Can or will the containment system be able to withstand saturated soil or moisture?
YES_____NO_____. If yes, describe how the containment system withstands or will withstand saturated soil or moisture.

j. Discuss what and how climatic conditions such as frost heave were included in the design, if applicable.

k. Discuss what stresses of daily operations (including all vehicular traffic) were included in the design.

2. Provide design drawings, profile drawings, calculations, design standards and specifications on the base or foundation to ensure it can support the secondary containment system. Include the following: (22 CCR 66265.193(c)(2)).

   Materials of construction.

   Methods of construction.

   Thickness of base.

3. Is or will there be a secondary containment leak detection system? YES_____NO_____. If yes, provide the following:

   Provide manufacturer's specifications and operating principles to show whether it is capable of the following: (22 CCR 66265.193(c)(3) & (4)).

   a. Describe the type of leak detection system used and whether it is capable of detecting failure of the primary and/or secondary containment systems.

   b. Describe how the detection system can detect any releases of hazardous waste and accumulated precipitation in the secondary containment system within 24 hours, or at the earliest practical time if the existing detection technology or site conditions will not allow detection of a release within 24 hours.

4. Describe if the secondary containment system is or will be sloped and designed and operated to drain any leaks, spills and precipitations?. (22 CCR 265.193(c)(4)).

   a. Are or will the tanks be elevated to prevent contact with any accumulated liquids?
   YES_____NO_____. If no, is or will the tank be constructed of materials compatible with the accumulated liquids? YES_____NO_____. If no, describe how this is or will be remedied.

b. Will any leaks, spills and precipitation drain to the lowest point in 24 hours?

c. Describe how accumulated liquids are or will be removed from the secondary containment system within 24 hours.

d. Is or will the secondary containment system be exposed to rainfall?
YES_____NO_____. If yes, provide the following:

Describe how the system has or will have the capacity to store the total volume of the largest tank in the system plus the rainfall from a 24-hour, 25-year storm? Refer to section V.B.8.d. for rainfall data. (22 CCR 66265.193(d)(1)).

e. Is or will the secondary containment system be connected to a sump?
YES_____NO_____. If yes, provide the volume of the sump.

Volume of sump.

f. Is or will a fire sprinkler system be located in the area of the secondary containment system?
YES_____NO_____. If yes, provide the following:

Does the containment system have excess volume to contain the fire suppressing water volume of the sprinkler system without overflow to the environment? (22 CCR 66270.14(b)(19)).
YES_____NO_____.

g. Describe how leaks, spills, and precipitation in the secondary containment system are or will be promptly sampled and analyzed for hazardous wastes. (22 CCR 66265.193(c)(4)(A)).

h. Describe how surface run-on is or will be prevented, unless the containment system has volume required in accordance with section V.H.4.d., plus an excess capacity to contain any surface water run-on that might enter the secondary containment system. (22 CCR 66265.193(e)(1)(B)).

i. Describe any dikes, berms, trenches, walls and/or drainage systems used to prevent run-on to the secondary containment system or give us calculations to show that the secondary containment system has sufficient excess capacity to withstand run-on from a 24-hour, 25-year storm. Refer to section V.B.8.d. for rainfall data.

5. Does or will the secondary containment system use a liner? YES_____NO_____. If yes, provide the following:

Describe the design, construction materials, methods of construction and how this system operates or will operate. Provide design drawings and design and material specifications to show how the liner system will contain the volume required by section V.H.4.d. and also do the following: (22 CCR 66265.193(d)(1) & (e)(1)).

a. Describe the inspection and test methods used to ensure the liner is free of cracks and gaps.

b. Describe how the liner system completely surrounds the tank and covers all surrounding earth likely to come into contact with wastes leaking from the tank(s).

Liner thickness.

6. Does or will the secondary containment system use a vault system? YES_____NO_____. If yes, provide the following:

   Describe the design, construction materials, methods of construction and how this system operates. Provide design drawings and design standards and material specifications to show how the vault system will contain the volume required by section V.H.4.d. and also do the following: (22 CCR 66265.193(d)(2) & (e)(2)).

   a. Does or will the vault system use chemical-resistant water stops at all joints?
      YES_____NO_____. If yes, provide the following:

      Provide drawings, specifications and related information that show the construction and location of the stops.

      Materials of construction, vault.

      Thickness of walls.

      Thickness of bottom.

      Thickness of top, if applicable.

   b. Is or will the interior of the vault be coated or lined with material that is compatible and impermeable to the hazardous waste?
      YES_____NO_____. If yes, provide the following:

      Describe the tests and inspections used to ensure no migration of hazardous waste through the vault walls.

      Liner or coating material.

      Thickness of liner.

   c. Can ignitable vapors form within the vault? YES_____NO_____.
      If yes, provide the following:

Describe if the vault is or will be ventilated, whether detection devices are or will be used, whether ignition sources are or will be eliminated, and the inspections used to ensure these measures.

d. Does or will the vault have an exterior moisture barrier? YES_____NO_____. If yes, provide the following:

Describe this barrier and the inspections used to ensure that moisture will not migrate through the vault walls.

7. Are or will double walled tanks be used as secondary containment? YES_____NO_____. If yes, provide the following:

Provide drawings, manufacturer's specifications and standardsto which the tanks were or will be constructed. In addition, include the following: (22 CCR 66265.193(d)(3) & (e)(3)).

a. Show how the double walled tank is or will be an integral structure (i.e., an inner tank within an outer shell) so that leaks from the inner tank are contained by the outer shell. Describe test methods and inspections used to ensure this.

b. Is or will the double walled tank be made of metal? YES_____NO_____. If yes, provide the following:

Describe the corrosion protection measures for both the interior surface of the inner tank and the exterior surface of the outer tank. Include the inspection procedures and test methods used to ensure this.

I. ENGINEER'S CERTIFICATION

Provide the engineer's certification as to structural integrity and suitability for handling hazardous waste of each tank system including the containment system. The assessment shall include, at a minimum, the following: (22 CCR 66270.16(a)).

1. Name of the registered engineer.

2. Registration number.

3. Engineering discipline.

4. Date of expiration of the engineer's registration.

5. Dimensions, capacity, and shell thickness of each tank.

6. Description of feed system, safety cutoff, bypass systems, and pressure controls (e.g., vents).

7. Diagram of piping, instrumentation, and process flow for each tank system.

8. Description of materials and equipment used to provide external corrosion protection.

9. For new tank systems, detailed description on how the tank system(s) will be installed.

10. Detailed plans and description of how the secondary containment system for each tank system is or will be designed, constructed, and operated.

11. Description of controls and practices to prevent spills and overflows.

12. For tank systems in which ignitable, reactive, or incompatible wastes are transferred, stored or treated, a description of how the operating procedures and tank system and facility design will achieve compliance.

13. Provide references to design standards or other available information used (or to be used) in design and construction of the tank.

14. Description of design specifications, including identification of construction materials and lining materials for the tank and secondary containment facilities (include pertinent characteristics such as corrosion or erosion resistance).

J. TANK TREATMENT UNITS, EXISTING AND PROPOSED

Is or will hazardous waste be treated in tanks?
YES_____NO_____. If yes, provide the following:

Provide the following information and description of existing and proposed treatment units. (22 CCR 66270.14(b)(19)).

1. Provide design drawings, profile drawings, and specifications for the treatment equipment that show:

    a. Dimensions and capacity.

    b. Materials of construction.

    c. Methods of construction.
    d. Operating instructions and procedures.

    e. Process control devices.

    f. Safety devices and detection devices.

    g. Overflow protection devices.

    h. External energy sources and requirements.

    i. Ancillary equipment.

2. Hazardous waste identification.

    a. Influent waste analysis.

    b. Effluent waste analysis.

3. What chemical treatment processes are used.

    a. Chemical reactions involved.

    b. Reaction efficiencies.

    c. Methods, analysis and tests to determine reaction efficiencies.

4. What physical treatment processes are used.

5. Process flow diagrams.

6. Whether batch or continuous feed process is used.

   a. If batch process, mass or volume per batch per time.

   b. If continuous feed process, mass or volume per time.

7. Safe operating procedures used.

8. Operation and maintenance instructions and manuals.

9. Inspections and schedules to ensure systems are working as designed.

10. Is or will the treatment be performed outdoors? YES_____NO_____. If yes, discuss how releases to the following areas are or will be prevented:

   a. Groundwater or subsurface environment.

   b. Surface water, wetlands, and surface soils.

11. Does or will the treatment process produce gases, vapors or particulates that can escape into the air? YES_____NO_____. If yes, how is or will this be prevented?

SECTION VI - STANDARDIZED PERMIT CLOSURE PLAN

PURPOSE

This guidance document was developed by the Department of Toxic Substances Control (Department) to assist owners and operators of facilities applying for a standardized permit to produce a workable closure plan. This guidance document takes the owners and operators through a step-by-step closure plan preparation process. By completing this section, the owners and operators will meet the closure plan requirement for a standardized permit.

For further closure plan guidance, the following documents may be referenced: *EACH OF THE FOLLOWING REFERENCES WILL BE CHECKED TO ASSURE THAT THE LATEST VERSION IS CITED*

- Permit Writer Instructions for Closure of Storage & Treatment Facilities, 1993.
- RCRA Guidance Manual for Subpart G closure and Post-Closure Care Standards and Subpart H Cost Estimating Requirements, OSWER Policy Directive #9476.00-5, 1987.
- Clean Closure of Hazardous Waste Tank Systems and Container Units, EPA/530-SW-88-0005, OSWER Policy Directive 9476.00-11, 1987.
- Guidance Manual: Cost Estimates for Closure and Post-Closure Plans (Subparts G and H), EPA #530-SW-86-036, OSWER Policy Directive Number 9476.00-6.

The first document may be obtained from Hossein Nassiri at the Department at (916)327-4493. The last three documents may be obtained from National Technical information Services at (703)487-4650 or U.S. EPA, Public Information Center at (415)744-1500.

INSTRUCTION FOR PREPARING CLOSURE PLAN

1. Carefully read each instruction and question.
2. Provide answers to all requested information. The answers can be given in the blanks provided or in a separate document. If more space is needed than the space given, attach additional pages.
3. Check to see that all sections of the closure plan have been addressed.

A. INTRODUCTION

Briefly summarize the procedures the facility will use to achieve closure (A closure is a process where all of the facility's hazardous waste is removed and the facility is decontaminated).

B. MAXIMUM INVENTORY ESTIMATES

(66265.112(b)(3) & (4))

This section of the closure plan describes the maximum hazardous waste inventory that will be held on site at any one time over the active life of the facility. The maximum inventory should be a sum of all hazardous waste capacity and waste generated from closure activities.

1. Give an estimate of maximum waste inventory.

a) Maximum hazardous waste in all containers (A sum of all volumes given in section IV A.1.b.).

b) Maximum hazardous waste in all tanks (A sum of all volumes given in section V A.1.b.).

c) Other wastes stored on facility.

2. Provide an estimate of the amount of waste that will be generated from closure activities (i.e. washwater generated, sand from sand blasting, etc.).

Note: The following figures can be used to estimate the quantity of waste generated from closure activities.

High-Pressure Washing
10 gallons of washwater generated per 1 drum cleaned.
50 gallons of washwater generated for 1 pump & lines cleaned.
4 gallons of washwater generated per square foot of surface cleaned.
Steam Cleaning
4 gallons of washwater generated per square foot of surface cleaned.
Sand Blasting
0.62 gallons of sand per square foot of surface cleaned.

a) Calculate the amount of waste generated from the decontamination of containers and container areas.

b) Calculate the amount of waste generated from the decontamination of tanks and tank areas.

c) Calculate the waste generated from the decontamination of other areas.

C. WASTE REMOVAL/TREATMENT

(66265.112 (b)(4))

Describe how the final batch of waste will be removed from the facility or treated from the facility. The wastes can be removed/treated by the following methods:

a) Processing the waste through the facility's process.

b) Taking the waste off-site to a treatment facility.

c) Taking the waste off-site to a disposal facility.

d) Other.

D. DECONTAMINATION PROCEDURE

(66265.112 (b) (4))

This section of the closure plan identifies all structures, buildings, and equipment that the facility plans to decontaminate.

1. **Circle all equipment, structures, and buildings the facility plans to decontaminate. Identify all circled items on a plot plan. If an item cannot be identified on the plot plan, give a brief description including the number, size and material of construction.**

   a) Tanks.

   b) Containers.

   c) Treatment Process Units (e.g., evaporators, metal recovery).

d) Secondary Containment Systems.

e) Floors & Walls of Buildings.

f) Pipes, Pumps, Valves, Hoses.

g) Loading and Unloading Pads.

h) Equipment (e.g., forklifts, dollies, pallets, shovels).

i) Others.

2. Describe the procedures used to decontaminate equipment, buildings and structures identified in the previous question. The decontamination methods should be selected from the methods given in table 1. The decontamination methods should be selected based on criteria such as waste contaminants, level of contamination and surface materials being cleaned.

E. CONFIRMATION SAMPLING PLAN FOR STRUCTURES, EQUIPMENT AND BUILDINGS

(66265.112(b)(4))

This section of the closure plan shall describe a sampling plan that will demonstrate the ability of the facility to meet the clean-up standards. There are basically, two clean up levels that are used to achieve clean closure. The two clean-up levels are:

Non-Detect - Non-Detect is the detection limit for a specific analytical method. (e.g., method 8080, Aldrin, 0.004 ug/L).

Background - Background clean-up level is applicable only for soil samples and inorganic (metals) constituents. Background clean-up level is the level of inorganic content that exists in natural soil without any outside influence.
If the clean-up levels based on non-detect and background
cannot be met, the facility may submit a risk assessment that

will provide a new clean-up level that does not pose a
substantial present or potential threat to human health and
the environment.

Note: The following two flowcharts can be used as a general guideline in determining the course of action for the closure operation.

The sampling plan is used to verify the effectiveness of the decontamination operation or to demonstrate that no contamination has ever taken place. The sampling should be performed only after a thorough visual inspection and a proper decontamination.

There are generally two sampling methods that are used to determine the locations and number of sampling points: biased (judgmental) and statistical (random). They are as follows:

Biased Sampling - Used in situations where locations of point sources of the contamination are known or suspected. For example, a biased sample would be taken from areas that are either visibly contaminated or suspected to be contaminated.

Statistical Sampling - Used in situations where there is no information or knowledge available about the sampling area. The statistical sampling method is especially useful for covering large unknown sampling area.

There are four surface sampling methods that are used for the closure of treatment and storage facilities. They are as follows:

Wipe Sampling - This method is used for sampling smooth, impervious and solid surfaces such as metal tanks, epoxy coated concrete, vinyl liner, etc. One wipe sample, at a minimum, should be taken from each tank. A typical wipe sample area is 1 square foot. The samples should be taken using filter paper or gauze pad moistened with a solvent that will remove the contaminant from the surface.

Chip Sampling - This method is used for sampling porous surfaces such as asphalt, concrete and wood. In this method, the surface of the material is chipped out using tools such as a chisel or an electric hammer. The chip sample should have a size approximately 10 cm x 10 cm in area and 1/8 inch in depth.

Cleaning Solution Sampling - This method is used for sampling items such as pumps, pipes, filters and equipment. This method is used for sampling parts that are

physically difficult to get to or too small to sample individually.

Polychlorinated Biphenyls (PCB) Wipe Sampling - A specific procedure for sampling PCB is available in the EPA document, Field Manual for Grid Sampling of PCB Spill Sites to Verify Cleanup, Interim Report #3, Work Assignment 37.

There is no specific guidance on the number of samples required for sampling structures, equipment, and buildings. However, the sampling number should be large enough to prove that all structures, equipment, and buildings have been properly decontaminated. For each sample and each sample set that is taken at the site, a quality control measure is required to establish the data's quality for each analytical result. Therefore, additional quality control samples are required.

Additional information about sampling methods described above can be obtained from the following EPA guidance document, Compendium of Waste Sampling Procedures, EPA/540/P-91/008.

All sampling should follow the procedure specified in the document, EPA Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW-846.

NOTE: The EPA guidance documents may be obtained from National Technical information Services at (703)487-4650 or U.S. EPA, Public Information Center at (415)744-1500.

Describe the sampling procedures to be used for sampling buildings, equipment and structures for contamination. The description should discuss the number of samples to be taken, sampling methods, location of sampling points and rationale used for selecting sampling point locations. All structures, equipment and buildings that were identified in section D.1. should be included in the sampling description.

F. CONFIRMATION SOIL SAMPLING PLAN

(66265.112(b)(4))

A soil sampling plan may or may not be required for a facility's closure plan. Soil sampling may be required based on current and/or future conditions of the facility. As discussed in the previous section, either biased or statistical sampling methods can be utilized for the soil sampling plan. Regardless of the chosen sampling method, the soil samples shall be taken from the surface and at a certain depth, typically 1 to 2 foot, from the surface. If the soil is covered, such as under a concrete pad or asphalted surface, soil sampling may be required at the time of the closure depending on the cover condition (i.e.

cracks in concrete).

The number of samples required depends on conditions such as area to be sampled, degree of contamination and contaminants of concern. For this guidance purpose, a minimum of 4 soil samples is recommended for each storage and treatment area.

Additionally, a soil sampling plan is required to have background samples. Background soil samples are used to determine that no soil contamination has occurred. The background sample locations must be from areas that are known to be uncontaminated. **All sampling shall follow the procedures specified in the document, Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW-846, 3rd edition 1986.**

1. Describe the soil sampling procedure to be used for each storage and treatment area. Discuss the number of samples to be taken, sampling methods, location of sampling points and rationale used for selecting sampling point locations.

2. Describe the background soil sampling procedure. The description shall discuss the number of samples taken, sampling methods, location of sampling points, and rationale used for selecting sampling point locations.

G. ANALYTICAL TEST METHODS

(66265.112(b)(4))

Note 1: All laboratory analyses must be performed at a California Certified Analytical Laboratory.
Note 2: If explanation or assistance is needed with this section, contact the Regulatory and Engineering Support at (916)322-7893.

All analytical methods used for closure must be from methods found in Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW-846, 3rd Edition 1986 and Title 22, California Code of Regulation, Section 66261.126, Appendix III. There are two types of methods required for analysis: Sample Preparation methods (i.e., method 3050: Acid Digestion of Sediments, Sludge, and Soils) and Analytical methods (i.e., Methods 7020: Aluminum, AA, Direct Aspiration).

For many waste constituents, there are generally at least two analytical methods available (general and specific). To develop a clean closure standard, the method with the lowest detection limit should be used.

Describe the analysis that will be performed on samples. The analysis description shall include: waste constituents being analyzed, preparation method, analysis method and detection limit.

Constituent	Preparation Method	Analysis Method	Detection Limit
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

H. CLOSURE COST ESTIMATE

(66265.142)

This section of the closure plan describes a procedure to estimate of the cost to properly close the facility. A closure cost estimate must reflect all work that is proposed in the closure plan. Before a facility estimates its closure cost, the following points must be considered:

- The closure cost estimate must be high enough to ensure that if, at any time the facility begins closure, the cost would not exceed the cost estimate.
- The closure cost estimate must be based on the cost to the facility of hiring a third party to close the facility. A third party is an independent party who cannot be employed by a parent company or by a subsidiary of the facility's company.
- The closure cost estimate may not incorporate any salvage value that may be recouped with sale of wastes, structures, equipment, and other assets.
- Although the final batch of waste may be removed/treated using facility's normal operating process, for closure cost estimate purpose, the cost shall reflect the cost of sending waste off- site for treatment or disposal.
- A 20% contingency cost is added to the final estimate to account for any unknowns or errors.
- The remediation cost for treating/removing contaminated soil may be required for closure cost estimate at the time of closure.

The closure cost estimate is required to be updated if any of the following occur:

- Annual inflation (To account for annual inflation, the facility may either recalculate estimates every year using that year's current prices **or** update the cost estimate annually by multiplying the current estimates by an inflation factor).
- Changes in the facility's operation.
- Increased capacity.
- Any remediation that may be required at the time of closure.

Table 2 should be used to show the closure cost estimate. Attach separate pages showing calculations that justify the cost estimates.

Table 2: Closure Cost Estimate			
Description	Quantity (ie. gallon, pounds, unit)	Cost/ Quantity	Total Cost
A. Costs for Removal/Disposal/Treatment of:			
Waste in Containers			
Waste in Tanks			
Washwater/Residue Generated from Closure Activities			
Other Wastes			
		SUBTOTAL:	
B. Costs for Removal/Disposal/Treatment of			
Containers			
Tanks			
Ancillary Equipment			
Structures/Buildings			
		SUBTOTAL:	
C. Decontamination Costs:			
Tanks			
Containers			
Ancillary Equipment			
Structures/Buildings			

Additional Equipment			
Removal/Disposal of Decontamination Wastewater			
		SUBTOTAL:	

Table 2: Closure Cost Estimate (continued)

Description	Quantity (ie. gallon, pounds, unit)	Cost/ Quantity	Total Cost
D. Transportation Costs:			
Wastes from Containers			
Wastes from Tanks			
Tanks and Containers			
Structure/Buildings/Equipment			
E. Sampling Costs (includes quality control samples)			
Containers			
Tanks			
Ancillary Equipment			
Structures/Buildings			
Soil			
Washwater/Residue Generated from Closure Activities			
		SUBTOTAL:	
F. Closure Certification Costs			
Preparation of Certification (clerical)			
Preparation of Certification by P.E.			
Inspection by Certified P.E.			

Review by Certified P.E.			
		SUBTOTAL:	
		CLOSURE SUBTOTAL of Parts A, B, C, D, E, and F:	
		Contingency Factor of 20% of CLOSURE SUBTOTAL:	
		TOTAL (CLOSURE SUBTOTAL and Contingency Factor):	

I. CLOSURE SCHEDULE

(66265.112(b)(6) & (7), 66265.113)

Note: This section is for facility's information only. No submittal is necessary for this section.

The closure plan implementation must comply with the following closure schedule.

a) Wastes must be removed and structures/equipment decontaminated within 90 days of the date that the facility stopped receiving hazardous waste or the closure plan was approved whichever is later.

b) All closure activities must be completed within 180 days of the date that the facility stopped receiving hazardous waste or the closure plan was approved whichever is later.

J. HEALTH AND SAFETY PLAN

Note: Sections J and K will be required to be submitted when the facility is ready for closure. Therefore, no submittal is necessary at this time.

At the time of closure, the facility must have a health and safety plan that will provide protection to personnel during the closure activities.

The health and safety plan must address the following:

a) Hazard Identification - Identifies the hazards that will be present during closure.(e.g., confined spaces, heat stress, chemical hazards, heavy equipment use, etc.)

b) Hazard Evaluation - Evaluates the impact of closure on personnel or public health. The evaluation is usually accomplished by referring to the standard reference for data and guidelines on permissible levels of exposure.

c) Personal Protective Equipment (PPE) - Lists the PPEs used during the closure activities.

d) Environmental Monitoring - Monitoring of atmosphere and personnel to ensure a safe site environment.

e) Site Work Zones - Delineates zones or area at the facility where different types of closure activity will take place. The zones are defined to prevent the spread of hazardous waste.

f) Decontamination of Workers - Establishes the procedures for decontaminating closure personnel.

K. EMERGENCY PLAN

Describe the procedures for responding to emergencies that require immediate actions. The emergency plan must include the following:

a) A List of names and emergency functions of on-site personnel.

b) Location of nearest phone and an alternative means of communication.

c) A List of emergency organizations including the fire department, police, hospital and hazardous material emergency response unit. For each organization, the name, phone number and address shall be given. Further, directionsto the nearest hospital should be given.

d) A defined procedure for rapid evacuation of workers.

e) A complete list of emergency equipment at the facility.

L. CLOSURE CERTIFICATION

(66265.115)

Note: This section will be required to be submitted after the completion of closure activities. Therefore, no submittal is necessary at this time.

After all closure activities have been completed, a closure certification must be submitted. The certification must be submitted to DTSC by registered mail within 60 days of completion of closure activity.

1. The Closure certification shall contain the following:

a) Certification by independent Professional Engineer - This document must be signed by both the owner or operator and independent professional engineer registered in California.

b) Supervisory Personnel Description - Identify the person(s) or companies who were responsible for supervision of closure activities at the site, including transportation of waste and sample collection.

c) Summary of Closure Activities - Briefly describe the main activities performed for each closure activity.

d) Field Engineer Observation Report.

e) Sampling Data and Analysis - All sampling information such as sampling locations, soil boring log, chain of custody, analytical results should be included.

f) Discussion of Analytical Results.

g) Manifests - Copies of manifests showing the disposition of the waste inventory.

h) Modifications and Amendments to Closure Plan.

i) Photographs.

2. The facility also must keep and maintain the following documents at the facility until the closure certification approval:

a) Approved Closure Plan.

b) Copies of the independent Professional Engineer's field observation reports.

c) Laboratory results of samples analyzed.

d) Quality assurance/quality control demonstrations.

e) Manifests.

f) Miscellaneous documents.

g) Closure certification report.